Abstract

AN INTERNSHIP AT MIAMI UNIVERSITY LIBRARIES
CENTER FOR INFORMATION MANAGEMENT

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This report describes my technical communication internship at the Center for Information Management (CIM) at Miami University Libraries in Oxford, Ohio. My primary projects included ten short “Quick Start” software guides, a promotional brochure, a report on the Web tutorial, E-Learn, and two longer software reference manuals.

My tasks included planning the documentation and learning about the software and hardware in the CIM. These tasks incorporated the problem solving model described by Paul Anderson (1995) and others. As the lone writer at the library, I often developed my own solutions and resources to solve problems. In the Quick Start Guide project, I followed this problem solving process by creating a document specification, drafting documentation, performing usability testing, revising documentation, and evaluating the project.

During the internship, I discovered that effective communication is dynamic, that it requires decision making and compromise, and that learning is an ongoing part of technical communication.
An Internship at Miami University Libraries
Center for Information Management

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**Dedication**

To my family, who supported my pursuit of my graduate degree. Special thanks to my parents, my husband Mark, and my children Billy and Kristin, who have provided inspiration, advice, and humor every time they were needed.
Acknowledgments

For many years, Miami University has been like a second home to me. Completing my internship on campus enabled me to spend time with both of my “families.” I gratefully acknowledge the assistance I received from people within the Department of English, the Department of German, Russian, and East Asian Languages, and the Miami University Libraries.

Special thanks go to Belinda Barr, Judy Buttery, James Callahan, Jennie Dautermann, Robert Di Donato, Michael Howser, Judy Johnson, Jean Lutz, Lisa Rosenberger, Lisa Santucci, Judith Sessions, Michele Simmons, Holly Wissing, Rob Withers, Sue Wortman, Frances Yates, Jen-chien Yu, and Karyn Young. The efforts of these people made my tenure at the Center for Information Management pleasant and full of learning.
Chapter 1: An internship at the Center for Information Management

This report describes my fourteen week internship at the Center for Information Management (CIM) at Miami University Libraries in Oxford, Ohio. From May 3-August 6, 2004, I interned as a technical communicator for the CIM. As an intern, I was the only full time technical communicator working exclusively for the libraries.

In this chapter, I describe the CIM, my position within the organization, and how my work contributed to the overall goals of the organization.

Background

Established in 1809, Miami University is a state-assisted residential university located in southwestern Ohio. Since the 1820s, the resources of the Miami University Libraries have been crucial to the educational goals of the university. On the Oxford campus, King Library, Wertz Art/Architecture Library, Brill Science Library, and Amos Music Library serve the needs of a diverse academic population. Library collections now include 2.7 million books, 110,000 maps, 26,000 sound recordings, 20,000 journals, magazines, and newspapers, thousands of movies, videos, and DVDs, and nearly three million pieces of microfilm.\(^1\) As modern libraries have embraced the Information Age, the Miami University Libraries have been at the forefront of much of the technological progress within the university. Today the Libraries pledge to “support the research and teaching missions of the University by acquiring, organizing, preserving, and providing access to information in all forms.”\(^2\)

Organizational structure of the Miami University Libraries

The Miami University Libraries operate much like any other university department. Judith Sessions serves as the Dean of the University Libraries, and Richard Pettit is the Associate Dean. The next organizational tier consists of department heads. Over 100 librarians and support staff round out the rest of the organization.

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I worked within the Information Services Department, which occupies a suite of offices on the second floor. Belinda Barr, head of Information Services, served as my primary supervisor. Lisa Santucci, head of the CIM, had just returned from maternity leave, but she provided invaluable assistance, particularly during the second half of my internship.

In the CIM, I worked with James Callahan, manager of the CIM, and Karyn Young, senior library technician, who were experts on every computer and program in the CIM. Lisa Rosenberger, Environmental Education Specialist and Grants Writer at the Hefner Zoology Museum, Miami University, served as my writing mentor. I was fortunate to have access to them and to other people who were both excellent teachers and skilled communicators.

The Center for Information Management at Miami University Libraries
Created in 1998, the Center for Information Management (CIM) at Miami University Libraries is a self-service electronic resource facility that provides the tools necessary for students, faculty, and staff to make effective use of information. It is a place that encourages individual learning, group problem solving, and interaction. It is also a place where users can master essential information technology tools in informal group and individual settings.3

The CIM is also a major component of the university-wide “First in 2009” initiative, which is intended to foster improvements that will make Miami University one of the top universities in the nation by the time it celebrates its bicentennial in 2009. As part of this plan, the University Libraries are undertaking a major Information Literacy initiative to support research collaboration among the library, faculty, and students4.

During the academic year, the CIM operates at peak capacity, enabling patrons to work alone or collaboratively at nearly any time of day or night. The facility includes over 30 computers (Macintosh OS X and Windows XP) which run a variety of software. Peripherals include flatbed, slide, and large format scanners, CD/DVD mass duplicators, and audio and video stations. CIM attendants receive special training to assist patrons in operating equipment and software.

3 Ibid
Librarians and staff also conduct frequent workshops to teach patrons to search for, analyze, retrieve, and transform information into various useful formats (video, audio, print, etc.).

**Organizational culture of the Miami University Libraries and the CIM**

Working for an academic library is a much different experience than working in industry. After all, there are few organizations that are more reader-centered than a library! I was glad for the chance to work in this environment, especially since I had worked as a school librarian several years ago.

Because of the focus on information literacy, I found King Library and the CIM to be exceptionally supportive communications environments. Although I worked as a lone writer, I was surrounded by communicators. Librarians worked together to improve program offerings and to brainstorm new ways of reaching their audiences. Lively staff meetings and e-mail exchanges were frequent events. The library’s active listserv also contributed to communication among staff in all the buildings.

As one might expect, the librarians at King are also exceptionally skillful researchers and teachers. Each librarian specializes in a different academic area. When they weren’t planning classes, learning new skills, or collaborating on library projects, librarians took turns working at the lobby helpdesk, assisting patrons with library questions. Having so many subject matter experts to consult was a rare luxury for me.

In the Information Age, librarians are among the most highly skilled users of computer technology. Most librarians teach workshops or classes in technology and information management. I was fortunate to observe a few workshops during my time at the CIM, and I was unfailingly impressed by the expertise and helpfulness of the librarians, staff, and student workers. As a graduate student, I failed to take advantage of the CIM’s offerings. But as an intern, I was glad for the chance to work in such a technologically supportive environment.

**Nature of my work in the CIM**

Miami University students, staff, and faculty use the CIM to design Web pages, scan slides, documents, or maps, print posters, dub videocassettes, create movies, and digitize or edit sound.
As the lone writer for the CIM, my primary tasks were to produce two types of software
documentation: short “Quick Start” guides to help patrons complete basic software tasks, and
longer reference manuals that addressed more complex software tasks. Although several pieces
of documentation had been created for the CIM in the past, there was little standardization. Many
of the documents were classroom handouts, prepared for particular workshops or special
tutorials. Other documents addressed outdated versions of CIM software or hardware.
Sometimes, the manufacturer’s online support materials contradicted the unique configuration of
the CIM’s software.

Belinda and James envisioned documents that could serve multiple audiences, including CIM
employees, librarians, students, faculty, and staff. All documents needed to feature the new
Miami University Libraries identity standard, a red and black swirl that identified the libraries as
“The Learning Hub.” Furthermore, the documents needed to be consistent, clear, and concise.

In addition to creating software and hardware documentation, I designed a new promotional
brochure for the CIM, focusing on the unique tasks that learners could complete there. To further
promote the information literacy goals of the library, I also completed a recommendation report
for the authors of the library’s new Web tutorial, E-Learn.

In the next chapter of this report, I will describe my internship in detail, discussing major
projects and activities. The ten Quick Start Guides became a major project during my internship;
in Chapter 3, I will discuss how I approached that task. In Chapter 4, I will evaluate the
internship, describing the ways that I applied principles of technical communication.
Chapter 2: An overview of the internship

My internship was unique in many ways. Although the library had frequently employed interns as librarians, I was the first technical communication intern. As the ‘pioneer,’ I was granted fairly wide latitude in how I chose to work. My schedule was self-determined; I planned each day by evaluating which tasks would be of the greatest benefit to my progress. Except for meeting days, I decided on my own how to spend my time.

Planning project tasks and time

During the fourteen weeks of my internship, I spent approximately 1/3 of my time writing and revising. Although I’d expected writing and revising to be my primary tasks—and they were—I was surprised by how much additional time it took to learn software and hardware or to learn how to manipulate the graphics that I acquired. As time went by, I learned more quickly, but many learning experiences simply could not be rushed. In fact, I was learning tasks in and around the CIM for the entire span of the internship. Figure 1 illustrates the percentage of internship time spent on typical tasks.

Figure 1: Percentage of time spent on internship tasks
I welcomed the chance to focus on a single task at a time. For instance, I frequently devoted an entire day to one task, such as working with graphics in the brochure. Without the flexibility of my internship schedule, that sort of time commitment would have been difficult.

**Project schedules**
During my internship, I worked on four major projects: an informational brochure for the CIM; an analysis and report concerning E-Learn, the library’s online information literacy tutorial; ten Quick Start Guides to CIM software and hardware; and two longer (15-20 pages) pieces of documentation for software. When I met with Belinda and James on the first day of my internship, we planned a loose schedule for these projects:

**Week 1**
- Learn “how-to” tasks—shorter documentation
- Begin to document (short documentation)

**Weeks 2-4**
- Continue short documentation
- Introduce CIM brochure
- Finish up short documentation

**Weeks 5-12**
- Finish CIM brochure
- Review eLearn
- Begin to learn complex tasks for longer documentation
- Create longer documentation

**Weeks 13-14**
- Finish and polish all documentation

As far as start dates went, this schedule was accurate; however, the completion dates of virtually every project shifted. In one case, the project that we assumed would require a very short time actually required the most time. Figure 2 demonstrates a breakdown of hours spent per week on each project. This change in hours reflects a necessary flexibility, which I will discuss in the following sections.
Figure 2: Weekly percentage of time spent on internship projects

Brochure
At least two brochures had been developed for the CIM in the past. One of the brochures was a very simple two-page sheet, more of a handout. The other brochure took a different approach, featuring colorful graphics and employing marketing-style rhetoric to describe the CIM’s features.

My task was to use Adobe InDesign to update and redesign the brochure. The new design needed to be both informative and colorful, a hybrid of the previous versions. Realizing that the CIM’s capabilities were not described fully by a laundry list of available programs, we decided to emphasize the specific tasks that users could complete: making posters, scanning photos, designing Web sites, etc. Our audience would include faculty and staff, or perhaps people who were touring the libraries. Copies of the brochure would be available in the CIM and could be distributed at library presentations as well.

I began this project by preparing five different brochure prototypes for James and Belinda. The final design reflected a combination of graphics and layout from three of the prototypes. We decided to keep costs low by printing a four page brochure on standard sized paper, folded in half to measure 5.5 by 8.5 inches. We also arranged to fold the brochures ourselves. Pricing
quotes obtained from the Miami University Print Center indicated that we could print 1200 color brochures on coated paper for $636.00 (53 cents apiece).

The brochure required minimal text composition. James created an introductory paragraph and provided an updated list of software. My main challenge was to design pages and graphics. Although I had used Adobe PageMaker to design a brochure for a MTSC project, I found that I still needed to work with InDesign for quite a while before I felt comfortable. This learning process became frustrating at times, because the program was new and few of my co-workers had used it. I also found that its Help files and online resources did not meet my needs.

James provided the electronic files for two of the previous brochures. Most of the information was outdated, but the photographs of CIM users were still useful. I also had access to the new library identity standard, which needed to be included on all library documentation. Unfortunately, the standard was available only in limited formats, which made it difficult to edit; after some experimentation, James was able to improve its resolution in Adobe Illustrator.

Although the existing photographs were helpful, I still needed to obtain more views. I took several photos of staff working on various projects in the CIM. My goal was to represent both genders, as well as people of different ages and races, in the brochure. As I collected images, I often turned to Photoshop or Fireworks to improve the brightness and color of the images. I became comfortable working in both applications, sometimes creating PSD and PNG formats of the same photograph to compare them.

Because our MTSC brochure project had been processed by Miami’s Print Center, I was already familiar with their requirements. I was able to send my files electronically, which sped up the processing time considerably. Remembering that colors on a computer screen do not always match printed colors, I requested paper dummies in addition to the PDF that the Print Center provided. This decision provided peace of mind when it came time to place the order for the entire 1200 copies.
Before printing the order, I circulated the final version of the brochure to several people. This process took several weeks, since scheduled staff vacations sometimes delayed my progress. Dean Judith Sessions gave final approval, and Lisa Santucci had the brochures printed during the thirteenth week of my internship.

**E-Learn report**

As a former librarian and educator, I hoped to be able to draw on my experience at some point during the internship. Therefore, I was pleased to begin the E-Learn project, which enabled me to study information literacy, to apply concepts I had learned in a graduate course on human learning, and to analyze Web site design.

Funded by a grant from the Ohio Board of Regents, E-Learn is an online tutorial developed by a team of Miami University librarians and staff (http://elearn.lib.muohio.edu/home.html). My supervisor asked me to evaluate E-Learn and write a recommendation report for her and the three librarians who made up the core of the development team: Lisa Santucci, Jen-chien Yu, and Rob Withers. The assignment seemed fairly broad, at first; I was not even sure how to approach it. However, I soon discovered several resources to help me create the final report.

Shortly before I began studying E-Learn, I attended a campus presentation by Alane Wilson of the Online Computer Library Center (OCLC). During her presentation, Ms. Wilson noted several cultural trends that could influence the content and design of online academic library tutorials:

- Academic library patrons want to be fairly autonomous
- Gen Y’s penchant for gaming means that information is increasingly being structured with a ‘collaborative competitive’ emphasis
- E-learning and lifelong learning continue to grow in importance.\(^5\)

I planned to meet with the team before beginning to write the report, but in the meantime I decided that I needed to examine other online tutorials in order to compare E-Learn. I focused on seven public and private Ohio universities, linking directly from an information literacy clearinghouse site (http://www.west.asu.edu/jbuenke/librarianship/)

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\(^5\) A. Wilson, public presentation, 21 June 2004
information_literacy.html). Upon Lisa’s recommendation, I also looked at some of Penn State’s tutorials (http://www.libraries.psu.edu/instruction/tutorials.htm). These sites gave me an idea of the features that were common to all of the sites, as well as examples of several approaches to design and content.

My initial meeting with the team helped me to narrow the focus of the report. I discovered that the tutorial was little more than a year old, having been tested by incoming freshmen in August, 2003. The version that I had been studying was a little different from the version the students had tested. For instance, to facilitate registration and user surveys, the team had delivered the original site on Blackboard, not on a public site. The team had even developed a special Flash introduction that I had not seen.

Furthermore, E-Learn was about to change again. The team had proposed it to the university as an online credit course. Because my internship would end before the new course could be approved, the team asked that my report focus on content, consistency, and accuracy within the present site. We agreed on a due date and decided to meet again when I was ready to distribute the report.

I approached the project by working through a series of layers. First, I scanned the entire site to locate typographical errors, misspelled words, and other easily corrected problems. Then I went a bit deeper to compare E-Learn’s features to other sites, noting similarities and differences. Finally, I studied consistency across the site, in which I addressed tone, content, graphics, and other more complex categories.

I even found time for some informal user testing. My husband, Mark, is a high school English teacher. My son Billy was a 19 year old sophomore at Miami, and my daughter Kristin was a 16 year old high school junior. Each of them related to the target audience—incoming Miami students—in some aspects. I asked them to navigate through the site and provide feedback. Their comments helped shape some of my recommendations within the report.
The body of my report addressed organization, navigation, pedagogy, graphics, and hypertext. Since many topics were best explained by an illustration, I created an electronic report, providing hyperlinks to examples from other sites and to E-Learn itself. In addition to the executive summary and the list of references, I also created two appendices. Appendix A contained an annotated bibliography of the other information literacy sites I had studied. In Appendix B I provided a hyperlinked list of E-Learn glitches in mechanics, grammar, spelling, clarity and consistency. Appendix B was very comprehensive, but also very lengthy—I worried that it might appear overly critical.

To support the use of hypertext, I copied all files to CD and distributed them to my supervisor and to the core team members at our next meeting. To my relief, I found that I need’t have worried about Appendix B; the report was well-received. The librarians used Appendix B almost immediately to correct minor errors ‘on the fly.’ More complex issues were slated for future discussions and planning sessions for E-Learn.

A portion of the E-Learn report, including the executive summary, is included in Appendix A.

**Quick Start Guides**

By far, the Quick Start Guides (QSGs) proved to be the defining learning experience of my internship. Quick Start Guides, which were 1-4 pages long, were intended to help novice users complete one or two basic tasks in the CIM and to provide a brief reference guide for staff. At first, Belinda, James, and I estimated that this project would consume less than half of my internship time; however, we soon discovered that we were wrong. I worked on QSGs throughout my entire internship.

My initial tasks included planning the documentation and learning about the software that James wished to feature in the QSGs. Then, using a style sheet and a Microsoft Word template that I designed, I created a two column format that enabled me to incorporate screen captures and photographs. I worked in Adobe Photoshop and Macromedia Fireworks to edit and label graphics. Because the guides were short, I was able to complete usability testing on almost all of them before the end of my internship.
In Chapter 3, I will discuss the Quick Start Guide project in further detail.

**Longer documentation**

My internship was more than half over when I began working on my final project, the longer documentation. By this time, I had learned a great deal about the CIM and its technology, and I had worked to refine the writing style I used for the Quick Start Guides. For these reasons, the longer documentation was a fairly straightforward project.

My supervisor, Belinda, and James, the CIM manager, had discussed creating longer guides for more complex software. These guides would be helpful to both the staff and CIM users. Because software and hardware were undergoing upgrades during my time at the CIM, I was able to complete only two of these guides: a guide to Sound Studio, a program I had already learned for two of the Quick Start Guides; and a guide to iMovie 4, which had been newly installed on just two computers so that bugs could be worked out.

In these ‘long docs’, I was able to go beyond the basic tasks presented in the Quick Start Guides to present more advanced options. Working from existing documentation, which included the users’ manuals for the software as well as a CIM guide to iMovie 2, I created preliminary tables of contents for James’ approval. After he had suggested a few changes, I began working to develop sections, working again with a two-column format, placing screen captures and photographs to clarify procedures. The cover and table of contents of *Editing Audio with Sound Studio* are included as Appendix B.

Because these guides were much longer and more complex than the Quick Start Guides—and with my internship nearly at an end—formal usability testing proved impossible. Furthermore, problems with the new versions of iMovie delayed its full installation; in fact, it was actually removed from one of the two computers it had been installed on. Had there been time, I would have liked to conduct user tests at least on selected sections of these guides. As a compromise, I asked several librarians to review the guides and provide feedback.

After being limited to only 2-4 pages with the Quick Start Guides, the 15-20 page length of the long docs seemed a luxury. I found that it was easy to write enough to fill those pages. However,
the revision and checking process was equally extensive for both projects. And unexpected technical difficulties and unusual circumstances affected both projects to varying extents.

For me, technical communication became a process of finding ways of applying communication principles that were flexible enough to fit the unique requirements of a given project. In the next chapter, I will discuss the specific events that shaped the creation of the Quick Start Guides.
Chapter 3: Quick Start Guides

When Belinda, James, and I discussed creating Quick Start Guides (QSGs) at our initial meeting, I felt confident that my longer MTSC projects had prepared me well. I had even taught two semesters of ENG 313, in which my students worked in teams to create sets of instructions. I already knew a lot about formatting, graphics, and usability testing. To my surprise, I still had a lot to learn.

The first thing I learned was that short documentation is much harder to write than longer documentation. In fact, the major impediment to this project was its length—Quick Start Guides were intended to be no longer than two pages. This impediment presented an opportunity to apply the problem solving model described by Paul Anderson⁶ and others.

As I worked on this project, I found many other opportunities to apply the problem solving model. In fact, the problem solving process began with the creation of a document specification. The document specification served to define the problem and present a plan for its solution. Then I designed a solution (my QSG documents), learning about software and hardware as I worked. Finally, I tested and revised my solution several times. Even though this process did not conclude with a formal evaluation, I found several ways to assess the project before and after it was implemented in the CIM.

Creating the Document Specification

To define objectives and plan the project, I composed a document specification (see Appendix C). Before writing, I generated several questions for my subject matter expert, James. I also reviewed older CIM documentation, visited Web sites that Belinda had recommended, and located several Internet software tutorials. These steps helped me realize that the challenge of this project would be how to present information clearly and concisely—within that two page format.

James defined the audience for QSGs. He envisioned a novice user, someone who would not need full software functionality but who was interested in completing one or two tasks for a project. New CIM staff might also benefit from QSGs. The two primary functions for QSGs were as laminated reference sheets (organized in a binder) and as handouts that could be distributed to users. The laminated version would feature some color text and graphics, but handouts would be reproducible in black and white to minimize costs.

The page layout of the QSG templates presented quite a challenge. I developed several QSG templates to include in the appendix of the doc spec. I decided to enlarge the left margin to accommodate the binder rings and to shrink the other margins as far as I dared. To save space on the page, I placed the essential CIM contact information in the footer of each document.

Although we had agreed that the QSGs should feature the new library identity standard, I was unable to use its font—the library did not purchase it at the time the standard was developed. So I chose a close approximation (Arial Narrow Bold) for headings, setting the body text in 10-12 point Times New Roman.

I presented the doc spec and five versions of my QSG template for review. Both James and Belinda were unfamiliar with the concept of a doc spec, but they were pleased with the way that it outlined the project. Belinda even suggested sending a copy to Dean Judith Sessions. The doc spec also proved to be a stable document. When I revisited it later in the project, I was pleased to see that, with the exception of unavoidable schedule revisions, the project specifications had not changed.

**Determining the Content and Scope of the Project**

James was, of course, the best judge of the types of tasks that CIM users needed to perform. He soon provided a ranked list of specific tasks that he wanted me to address. The first list included the following twelve items:

1. Video into PowerPoint
2. Scanning a picture
3. Dreamweaver
4. Slide Scanner
5. Large Format Scanner  
6. Disc Duplicator  
7. Recording voice to an audio disc  
8. Video in web page  
9. ETD submission  
10. OCR  
11. Rollover effects in web page  
12. Dubbing VHS tapes  

Almost immediately, we had to revise the list. The large format scanner malfunctioned, and a new scanner was ordered. The CIM decided to purchase a new disc duplicator as well. Both of these items arrived too late in my internship for me to learn how to use them. Also, James realized that Cleaner, the software used to convert video formats, was about to be replaced on most machines by Compression Master. Unfortunately, the replacement would also occur late in my internship, too late to learn the program and compose the QSG.  

A few other changes altered the direction of the project. Some of these changes actually reduced the scope of the project. For example, the CIM planned to standardize the scanning software (VueScan) across both PC and Mac platforms, so I did not need to learn the three or four other applications used for PC scanning—a change that saved me considerable time. Also, I was able to combine rollovers and video for the Web into a single Dreamweaver QSG.  

However, the QSG that addressed digitizing audio needed to be expanded to four pages, and a new QSG to address voice recorded from a microphone was added to the list. There was even discussion about writing documentation for a specialized video conferencing laptop the library intended to offer at the Circulation desk. As the scope and content of the project fluctuated, I found that maintaining flexibility was essential.  

By the end of my internship, I had produced ten Quick Start Guides:  
1. Digitizing LP/cassette recordings for CD (Sound Studio/iTunes)  
2. Rollovers, audio, and video in Dreamweaver
3. Creating Web pages in Dreamweaver
4. Electronic Theses and Dissertations (Adobe Acrobat)
5. Recording sound with USB microphones (Sound Studio/iTunes)
6. Scanning slides (VueScan)
7. Flatbed scanning (VueScan)
8. OCR scanning in ReadIris Pro 9
9. Dubbing VHS tapes
10. Inserting video clips into PowerPoint (Cleaner)

Like any other communication task, creating the QSGs required me to define my situation, purpose, audience, and medium. The doc spec provided much of the necessary guidance. But as a novice user, I helped to define my own audience. My experiences as a newcomer to the CIM made it easier for me to imagine the problems other novices might encounter.

**Negotiating the learning curve**
As I mentioned in Chapter One, learning software and hardware for the QSGs consumed much of my time. I began working to learn specific tasks, taking notes and capturing screens as I went. James provided several older CIM handouts, which provided some helpful reference points. I also discovered that online support existed for most of the software and hardware, although quality and usability were not always optimal.

One of the most difficult tasks I faced was learning to use Mac computers—I had not worked with Macs for several years. However, there was no alternative: much of the multimedia software was not available on PC. Although I was intimidated at first, I soon became a Mac enthusiast. I liked the ‘drag and drop’ functionality of the interface, and I was pleased by the stability of the operating system. Mac software was powerful and functional, allowing me to accomplish tasks quickly and efficiently. James and Belinda introduced me to utilities like Grab, which enabled me to take better screen shots than the keyboard commands. Other people had told me that Macs performed better than PCs on visual tasks, and I began to agree.

In addition to making a transition from PC to Mac, I had to learn how CIM computers handled files. For example, logging off machines automatically erased files saved to the desktop. Files
could be saved to a common CIM folder or to a temporary folder; however, these folders were purged whenever they became too large. Many iMovie or Sound Studio projects grew large quite quickly and would not fit on standard storage media. Since I was used to saving open projects to the desktop or my universal disk space, it took me some time to plan my storage options for each project. This experience also reminded me that I needed to advise my readers about their own options for file storage.

Once I understood how CIM computers were configured, I felt more comfortable learning about hardware and software applications. I had some previous experience with Dreamweaver, Adobe Acrobat, and PowerPoint. I had also scanned photographs and documents before, so I felt confident that I could learn scanning and OCR tasks. However, I still needed to learn several applications that were entirely new to me. Before James told me about Compression Master, I began to learn Cleaner 5. I also worked with Sound Studio, iTunes, ReadIris, and VueScan, all of which were available only on Mac. Furthermore, I needed to learn how to use specialized hardware, which sometimes malfunctioned at inconvenient times.

**Other learning experiences**

Early in my internship, I was invited to observe the Learning Technologies Summer Institute, a yearly faculty workshop conducted in the CIM and in the adjacent classroom (KAMM). Although the workshop was not specifically geared to my QSG tasks, I increased my familiarity with typical software tasks simply by observing instructors and learners. During Rob Withers’ presentation, for example, I picked up a few tips for Photoshop, which came in handy as I worked on graphics for the QSGs, brochure, and longer documentation. Additionally, the projects that participants completed in iMovie 3 were still fresh in my mind when I began learning iMovie 4 for the longer documentation.

Another method of learning was to observe the staff as they instructed CIM patrons in common tasks. I was impressed by how knowledgeable and helpful each staffer was; often, I learned shortcuts and helpful hints from watching CIM staffers at work.
Manipulating Graphics
Throughout the internship, I worked extensively with graphics. For the QSGs, my graphics consisted of the library identity standard, screen captures, and a few photographs. I found that I needed to learn a great deal about output resolution, bitmaps, vectors, and file formats.

The identity standard was problematic since it was available only in low-resolution formats: JPEG, PDF, and EPS. The librarians who had worked with the consultant had no other formats available, and no layers to work with. There was not even a piece of letterhead to scan.

When I began working with the QSGs, I experimented with size and resolution to produce the clearest image of the identity standard for print. Using both Photoshop and Fireworks, I created several different versions of the graphic. The final version was a little sharper and—fortunately—was small enough to conceal its slightly rasterized edges.

Screen captures were fairly easy to obtain, especially after I learned about Grab. For most screen capture editing, such as cropping, captioning, and labeling, I chose to work in Fireworks. I was glad for the opportunity to learn this software; the versatile PNG format became my favorite, although I still preferred Photoshop for editing my photographs.

Establishing Styles and Formatting in Microsoft Word
Although I had created a fairly comprehensive doc spec, I neglected to create a style sheet until almost three weeks into the project. This omission meant that I had to redo several numbered and bulleted lists to match my chosen style. However, even the style sheet did not completely prepare me for my ongoing battle with Microsoft Word.

As part of the doc spec, I had created templates for my QSGs. These templates proved both helpful and problematic. On one hand, I always had standard page setups, footers, and titles for each QSG; on the other hand, QSGs proved very hard to fit into a standardized template. For example, some QSGs were very difficult to confine to two pages. I struggled to alter the spacing after text, the location of bullets, and other variables to keep text readable and to employ adequate white space. However, Word tried to be ‘helpful,’ sometimes reformatting text in ways
that mystified me. After some time, I realized that I had checked a box that automatically updates styles. Unchecking that box solved many problems for me.

Ironically, on the last day of my internship I investigated the Society for Technical Communication’s resources for ‘lone writers’ like me. STC had several helpful articles and links. Imagine my chagrin when I discovered that there was a Web site available to help lone writers and others navigate Word (http://word.mvps.org/index.html). It would have saved me a lot of frustration if I had found this resource early in my internship, or even during my MTSC classes. I quickly reviewed all of my QSGs and fixed the formatting issues that had plagued me throughout the project. Now that I know about the site, I have recommended it to my students, family, and friends.

**Learning from Subject Matter Experts**

Because I was working within a library, I always had several subject matter experts available for consultation. All of the Information Services librarians were extremely proficient with the software and hardware in the CIM. The student workers in the CIM were also quite knowledgeable. However, James Callahan, the manager of the CIM, served as my primary subject matter expert. In addition to his technical proficiency, James proved to be an excellent and patient teacher. He was also able to solve most hardware or software problems as they developed, and he was always willing to assist patrons or staff who needed help with a project.

For eight weeks, I had come to rely upon James’ expertise and feedback as I created documentation. So it was surprising to learn that he had decided to take a leave of absence to sail with a yachting crew in the Marshall Islands. The opportunity arose quite suddenly, so we had time for only a short meeting before he left. During this meeting, we tried to plan for the rest of the internship and to anticipate any problems that might arise.

Although James had been my main subject matter expert, several other people were able to substitute for him. His assistant manager, Karyn Young, had only been on the job for three weeks before I arrived, but she was already an expert in all of the CIM’s software and hardware. The librarians in Information Services were also experts; many of them had taught courses covering the exact software I was learning.
The only real problem with James’ absence was our uncertainty about his preferences. For instance, as the new hardware and software arrived, it was installed with the understanding that it might need to be reconfigured upon James’ return in September. And although I had almost completed the QSG project before he left, I hadn’t even begun the longer documentation. I could only guess at what James would expect to see in the final product.

Although James’ absence was unexpected, I kept working on the documentation almost exactly as we had originally planned. James read over the QSGs before he left, and he approved a tentative table of contents for the longer documentation as well. Because I would be staying on at Miami, we agreed to meet when he returned to discuss the projects and make any necessary changes to the documentation.

**Conducting Usability Tests**

After I had worked on the QSGs for about two weeks, I was ready to test some of them. The library staff often performed usability testing, and they supported my efforts completely. Just to be safe, we checked with Human Subjects to be sure that user testing did not require their oversight. Fortunately, we were exempted from Human Subjects regulations, and I began developing test materials.

My test objectives were simple. I wanted to find out if my instructions were clear, correct, and understandable. I wanted to determine how much the graphics contributed to the guides, and whether my efforts to make tasks seem less intimidating were effective.

The CIM staff and my son Billy, a Miami University sophomore, graciously volunteered to test my instructions. My test materials included a pre-test questionnaire, a consent form, and a post-test questionnaire, which are included in Appendix D. To keep the tests brief, I provided photographs, slides, and other items to allow testers to complete the projects described in the instructions.

In the pre-test questionnaire, I asked for basic, non-identifying information, such as the tester’s connection to Miami and his or her familiarity with various software and hardware applications.
Next, testers read about the format of the test and signed a consent form. After working through the QSG, testers were asked to fill out a short post-test questionnaire to gauge their responses and opinions about the document.

I observed participants closely as they worked through the directions. Although I had initially planned to remain silent, I found that it was more efficient to ask participants a few questions as they worked. After each test, the users filled out a post-test questionnaire.

Test Participants
Several members of the CIM staff, including Paige, Mike, Nicole, Lindsay, and Karyn, performed most of my tests. As members of the staff, they were more knowledgeable than my target audience, but they were also more experienced in working with novices. They anticipated several problems that novices might encounter. Many of their observations dealt with terminology. For example, I had deliberately incorporated terminology that the manufacturers of the software used in their documentation, but my testers sometimes found it confusing. Their experiences led me to incorporate more user-friendly wording in a few locations within the QSGs.

Often testers identified problems that I had not even considered. While testing my flatbed scanner instructions (Appendix E), Nicole noticed that I had assumed that all scanners required users to place the item to be scanned flush against the hinge of the lid. In fact, some CIM scanners required the user to place the item at the opposite end of the scanner. In my revision, I inserted the text “The top of the document should face toward the embossed icon on the scanner bed.”

I was fortunate to share an office with Sue Wortman, who was familiar with most of the software I was using. Sue tested my scanner documentation on a real project—a set of family photos that she was scanning. Since my other tests had been based on projects that I provided, Sue’s test proved uniquely valuable to me. Because she scanned multiple photos, she noticed several details that I had missed. For example, I had assumed that users needed to save scans manually
after each final scan. Sue noticed that all of her scans were being saved automatically to the
desktop, eliminating the need for that step.

My son Billy tested almost all of the QSGs. Like the CIM staff, his level of computer experience
was higher than that of novice CIM users. However, his inexperience with older technologies,
such as the turntable that is used in the CIM, led me to reexamine the level of instruction that
people of different ages might require.

**Obstacles to user testing**
Occasionally, user testing was unavoidably delayed. Once, another library department borrowed
the slide feeder for several weeks, a development which made testing the slide scanning QSG
impossible. At other times, hardware malfunctioned. Once or twice, James suspected that the
G4s were causing problems.

I also had a limited choice of computers or platforms for certain programs—not every program
was installed on every computer. If a CIM user also needed the computer I was using, I
relinquished it and moved on to something else.

When tests were delayed, I compensated by fixing areas such as styles, graphics, and white
space. I also had several other guides to test; if software or hardware glitches prevented a
planned test, I could usually substitute a different QSG.

At times I served as my own tester; despite my subjectivity, I still caught several problems. My
goal was to put each guide through at least two separate user tests. I surpassed that number in
most cases, but I was unable to complete a full test of the *Quick Start Guide to Inserting Video
Clips into PowerPoint* even once.

**From usability testing to review**
After James left, the QSGs were temporarily shelved while I worked on other projects. During
Week 12, I revisited the QSGs, making small revisions to each document. Then I e-mailed three
QSGs each to Michael Howser, a librarian and instructor in Interactive Media Studies, Lisa
Santucci, and Karyn Young for review. My aim was to keep the demands on their time as small as possible.

The following week I decided to increase the reviewers’ feedback, and I placed the QSGs and some other documents into a common folder accessible to Belinda, Lisa, and several other people. Michael Howser was a particularly astute proofreader; he also identified the typical mistakes that he had observed his students make, enabling me to add extra guidance for certain tasks. Although reviews were somewhat less productive than usability testing, I was reminded that all writing can be improved, often in very subtle ways.

**Planning for future use**

On the very first day of my internship, James asked me how we could keep CIM documentation up to date. In fact, several components of my documentation became outmoded even during the fourteen weeks I was there. Hiring me full time was not possible. So providing a means to update and maintain the documentation I created was one of my major concerns.

In some cases, I was able to anticipate some of the software and hardware upgrades. During Week Ten, the CIM had installed the new version of VueScan on both PCs and Macs. I redid all of my screen captures, as well as significant portions of my text in all of my scanning documentation. I didn’t mind the additional work—in fact, I was glad to have the opportunity to provide the most up to date information possible. It was also reassuring to know that most of the long-established software seemed to change very little from one upgrade to the next.

Since I could not hope to learn all of the software and hardware in the CIM—or to anticipate future trends—my best option was to provide a QSG template for future writers (Appendix F). Near the end of my internship, I created a guide that combined my template and style sheet, including boilerplate text and a two-column format. I included helpful advice about the size of screen captures and typical conventions used in instructions. So even though the libraries may not be able to support a full time technical communicator, they will be able to provide a template to guide future CIM documentation writers from the staff.
Documents in action: an informal evaluation of the project

About five weeks after my internship ended, I visited the CIM to meet with James, who had just returned from his trip. To my delight, I found that the CIM had already begun using the Quick Start Guides. Karyn and James had produced color copies and placed them in a rack (along with the new brochure) for CIM users. The staff had been directing users to this rack, and both James and Karyn were frequently replenishing the QSGs—even the Cleaner/PowerPoint guide that I had nearly discarded when Cleaner was replaced by Compression Master. It had recently been used to help students complete a class assignment.

As we discussed the project, James reiterated that the QSGs might be useful in other contexts as well. Teachers could use them for class handouts. A PDF version of each guide could be placed on the Web. Hearing that the QSGs had already begun returning value and that they held promise for future use made me feel like a true technical communicator—an experience that I hope will continue. In the following chapter, I offer some observations on the profession and the experience of technical communication.
Chapter 4: The process of communication

Every communication project that I undertook required me to determine its objectives, create a plan, draft the writing, evaluate, and revise. In industry, this problem-solving process is often conducted by a team of writers. As the lone writer at the library, I needed to develop my own solutions and resources to solve problems. This approach afforded me great freedom in my writing; however, it also meant that I had to make many writing decisions on my own.

Writing as decision-making

Although my supervisors and my audience guided many of my major decisions, I found that I was responsible for some of the more esoteric choices. For example, during Week Six, I wrote in my journal:

> So much of this profession consists of making choices for people. I have to choose what’s important enough to be included in a two page QSG, for example. I have to choose which method I’ll teach—because there are always at least two ways to do things on a computer. Which way is better? Menus versus toolbars, screen shots versus text...it’s a never-ending array of choices....

Although the freedom of working on my own was delightful, there were times I doubted my decisions. Just as I knew that software and hardware would change over time, I also expected that my readers would change. As helpful as user testing was, it was only a short-term measurement, limited to an artificial context. I wished for an extra six months, a year, or even longer to observe, evaluate, and revise projects as necessary. I wished to conduct a long-term assessment to observe real users working with what I’d produced.

For this reason, I think that technical communication is best practiced as an ongoing process—if we are truly committed to making good decisions for our readers, there may never be a time when we can say that a project is completely finished. Communication is dynamic—it must be encouraged to change and grow, or else it ceases to meet its objectives.

Writing as compromise

With decision making came compromise. To maintain the type of flexibility I’ve described, I found that I also needed to make compromises, to create communications
that sometimes didn’t meet my original expectations. For example, I described the experience of limiting QSGs to two pages in another Week Six journal entry:

The 2 page QSGs have proved a real challenge for me. I have a tendency to ramble on. There’s no room for rambling in a QSG. Yet, there’s also much information that has to be conveyed. I’d load the thing with screen shots if I had more room, but I have to be careful with them, too. Often I’ve chopped pieces off of screens to make them fit into two inches or less. I think that this practice detracts from the reader’s total understanding, yet it is better than no picture at all. So it’s always a compromise.

Although writing concisely improved my documents, it also forced me to limit screen captures, which reduced my ability to communicate. Ultimately, I was comfortable with the compromises I made. To supplement the limited information I could present in a QSG, I usually provided links to other resources, such as a manufacturer’s site or to a Miami Knowledge Base topic. To minimize text, I almost always wrote in active voice. To call attention to important areas of screen captures or photographs, I outlined parts in red, labeling icons when necessary.

These tactics taught me ways to convey information even with minimal prose and minimal space. When I worked on the longer documentation later in the internship, I appreciated the chance to provide extra information through larger screen captures and expanded text.

**Writing as a learning experience**

Every day I assumed several roles: writer, educator, editor, and—most importantly—learner. As I mentioned previously, I had a lot to learn about software, hardware, and its context in the CIM. I also had a lot to learn about writing. My own expectations for my writing became more rigorous. Although I considered myself a good writer when I began the internship, devoting a forty hour week exclusively to communication enabled me to improve my skills in ways I could not have imagined during graduate school.

Although documentation sometimes has to be distributed to readers when it is barely ‘good enough’, I was fortunate to receive the time and support needed to create the best product possible during my fourteen weeks. For example, after some time away from the QSG project, I wrote in my journal:
I ended up spending the entire morning and about one hour of the afternoon revising QSGs. Incredible how my standards have changed in such a short time. I’m almost embarrassed by some of my earlier work. I was glad for the opportunity to revise. I added a screen shot or two, played with the spacing, etc. to make everything fit, and so on. I’m much happier with them now.

During the last week of my internship, I wrote:
*I spent the entire morning—and then some—in the CIM, going over the long docs and the QSGs. I couldn’t believe how much I still needed to tweak things—it really takes time to get a feel for a document, to really understand how it’s going to be used and how you want to say things. I went through every single document and almost all needed tweaking—formatting (thank you, Microsoft Word), language, punctuation, etc. I’m so glad I hung onto the QSGs til the end.*

Not only do these journal entries demonstrate the increased skill that comes from practice, they also demonstrate the learning benefits of an occasional shift in focus. Temporarily abandoning a project while working on another provided the variety I craved in my work and enabled me to bring a fresh perspective to a project when I returned to it.

**Final Thoughts**

As the first technical communicator to serve an internship at King Library, I was pleased to learn that the librarians were familiar with the MTSC curriculum. Lisa Santucci works with many MTSC graduate assistants and is a strong supporter of our program. Others were somewhat less familiar with the program, but they asked me questions and expressed admiration for the thorough and practical training we received.

In fact, the CIM turned out to be a natural location for MTSC work. For someone like me, a non-traditional student who needs to learn new software and hardware applications, the CIM provides an ideal environment. I regretted never using it during my teaching assistantship. I could have arranged a Dreamweaver or Photoshop tutorial for my ENG 313 students. At the very least, I could have integrated technology into my own teaching to a greater degree by attending one of the regularly scheduled CIM workshops.

Finally, one of the most satisfying results of my internship was that it reaffirmed that I had chosen the right profession, and the right type of communication environment, too. I enjoyed working with the intelligent people I met at King, people who were supportive of every
communications task I undertook. Every day I looked forward to working on my projects and refining my writing. Even learning the simple features of the Mac OS gave me great satisfaction. The summer of 2004 was memorable for many reasons—including the reemergence of the Brood X seventeen year cicadas—but for me it will be the summer that I knew I had chosen the right profession, that I was finally ready to work as a technical communicator.
References


Appendices
Appendix A: E-Learn executive summary and excerpt
Appendix B: Editing Audio with Sound Studio, cover and table of contents
Appendix C: Document Specification: CIM Quick Start Guides
Appendix D: Quick Start Guide usability testing documents
Appendix E: Quick Start Guide to Flatbed Scanning
Appendix F: Quick Start Guide Template
Appendix A: E-Learn executive summary and excerpt
Executive Summary

E-Learn is a remarkable project, offering students an interesting and innovative way to learn information literacy skills. In this report, I discuss general characteristics of online academic library tutorials, analyzing information design, visual appeal, and pedagogical impact. Drawing from this analysis, as well as reference materials, informal user feedback, and my own observations, I provide recommendations for future versions of E-Learn.

Library tutorial organization depends upon factors such as content, delivery method, intended audience, and technical constraints of the site. Common information literacy themes and site elements recur across all library tutorial sites. Typically, tutorials offer non-linear navigational structures. These structures often reinforce clickable graphics with hypertext to foster a user-friendly interface. Tutorial sites usually feature hands-on activities. Well-placed and consistent graphics/multimedia are vital; all the sites I examined made use of graphics. I also noticed that many sites embrace interactive multimedia elements.

E-Learn already does many things right. It received positive user comments, and it compares favorably against the Quality Checklist for Flexible Learning Materials. The graphic design of E-Learn is highly effective, combining some of the best elements of many other sites I visited. Screen shots, slide shows, and ‘try it here’ sections are among the most outstanding elements of the site.

My major recommendations are as follows:

- **Continue to refine organization and navigation**: Provide a more detailed outline of the structure of the site (page numbers, textual outlines, or graphical representations).
- **Continue to refine pedagogical techniques**:
  - Begin each module/unit with a forecasting statement or overview
  - Organize and expand the short quizzes.
  - Continue developing hands on segments.
  - Consider accessibility.
- **Promote consistency**:
  - Use Appendix B to review the site.
  - Match titles, headings, and links to each other word for word.
  - Maintain consistent tone.
- **Expand graphic elements**.
- **Expand hypertext elements**.
- **Restructure/consolidate existing introductory materials** on the home page to create adaptable, reusable content.

The high quality of E-Learn reflects the substantial talents of its team members, people who clearly care about education. I look forward to watching E-Learn evolve over the next several years.
E-Learn Report Excerpt: pp. 1-3

Recently, the Electronic Publishing Initiative at Columbia (EPIC) surveyed college students, faculty, and librarians to examine attitudes toward electronic resources. Based on their online student survey, EPIC researchers published the following conclusions:

- Electronic resources have become the main tool for students' information gathering.
- Undergraduate students in particular are heavily dependent on the World Wide Web. Graduate students are more likely to report a dependence on library sponsored electronic resources.
- Electronic resources are seen as providing convenience by letting students work from their home or residence hall, and by saving them time.
- Electronic resources increase the need for students to separate out the reliable from unreliable information, which students have difficulty doing.
- Formal instruction on how to evaluate electronic resources would be beneficial to most students.


The EPIC study, like many others, demonstrates the need for teaching information literacy concepts to incoming college students. Your team of Miami University librarians recently met this need by launching E-Learn (http://elearn.lib.muohio.edu/home.html), an online initiative that helps first year students develop information literacy competencies.

In this report, I discuss general characteristics of online academic library tutorials, analyzing information design, visual appeal, and pedagogical impact. Drawing from this analysis, reference materials, informal user feedback, and my own observations, I conclude with a few recommendations for future versions of E-Learn.

Method

E-Learn is a highly-developed site, the result of outstanding team effort. Furthermore, E-Learn may become an online (for credit) course soon. Keeping these facts in mind, I looked at both specific and general aspects relevant to technical communication, such as visual design, readability, language, and online navigation. Working carefully through each module, I read all pages multiple times, viewed all screen shots and slide shows, followed all hyperlinks, and completed all quizzes.

Other library tutorials

To better evaluate E-Learn, I examined other library tutorials. I focused on seven public and private Ohio universities, linking directly from an information literacy clearinghouse site, (http://www.west.asu.edu/jbuenke/librarianship/information_literacy.html). Upon Lisa’s recommendation, I also looked at some of Penn State’s tutorials (http://www.libraries.psu.edu/instruction/tutorials.htm). I include an annotated bibliography of these library tutorials in Appendix A: Information literacy tutorials sponsored by university libraries.

User comments

To gather other perspectives, I asked three individuals to visit E-Learn and make comments. This process was quite unscientific, since all three are related to me: my husband Mark, my son, Billy, and my daughter, Kristin. However, all of them bring unique talents and experiences to their evaluations.

As an English teacher at a local high school, Mark teaches research skills to his high school students. I asked him to read E-Learn from a teacher’s perspective, paying particular attention to pedagogical techniques and content.

Billy (age 19) recently completed his freshman year at Miami. Of the three individuals, Billy has the best knowledge of the resources available at the Miami University Libraries, although he primarily uses the Amos Music Library.
Although Kristin (age 16) is slightly younger than the target audience for E-Learn, she has a great deal of experience in Internet research, rhetoric, and critical thinking skills. Kristin studied E-Learn from the perspective of a college-bound high school student.

Reference materials
As I worked through the modules, I noticed some areas that might be revised for mechanics, grammar, spelling, clarity, or consistency. In most cases, I referred to Hodges’ Harbrace Handbook, 14th ed. and Lynch and Horton’s Web Style Guide, 2nd ed. For assistance with Internet terminology, I used Webopedia Online. All sources are listed in the References at the end of this paper.

Although I do not discuss grammar, spelling, typographical errors, etc. within this report, I prepared a detailed table for your use. Please see Appendix B: Mechanics, Grammar, Spelling, Clarity and Consistency in E-Learn.

Characteristics of Online Library Tutorials
Tutorial designers face the challenge of creating effective, visually appealing lessons while avoiding the pitfalls of ‘information overload.’ Academic libraries have met this challenge in a variety of ways.

Organization and content
Of the tutorial sites I visited, no two were organized quite the same way. Clearly, site organization depends upon a variety of factors, including content, delivery method, intended audience, and technical constraints of the site.

However, in addition to the actual lesson modules, I found that these items appeared in most tutorials:
- introductory material, including background information, orientation to the site, and technical specifications or support
- summary of skills to be learned
- links to the university’s resources
- glossaries
- exercises/hands on activities
- quizzes/assessments

I will discuss many of these items further in the Recommendations section of this report.

Linear vs. non-linear navigation
Smooth, transparent navigation enables users to move freely and quickly through tutorials, instantly comprehending the inherent structure and context of each lesson. Some tutorial designers impose a fixed, linear order of lessons. The University of Dayton’s FLYERS tutorial (http://library.udayton.edu/flyertutorial/), provides no ‘back’ or ‘home’ buttons, only a ‘continue’ button. However, most designers employ a freer, non-linear structure or a combination of linear/non-linear elements. The introductory material to Xavier University’s xTutor (http://www.xu.edu/library/xututor/introduction.cfm) offers immediate access to all tutorial chapters, but suggests a certain path “for best results.”

Many library tutorials provide redundant navigation, often backing up clickable graphics with hypertext to foster a user-friendly interface. On the other hand, redundant navigation options must clear to the user. The University of Cincinnati’s redundant navigation graphics consisted of random, unlabeled icons (http://www.libraries.uc.edu/help/library/index.htm). If they overlook the ALT tags, users have no idea where each icon leads.
Pedagogy
During her recent presentation at King Library, Alane Wilson of the Online Computer Library Center (OCLC) noted several trends that could influence the content and design of online tutorials:

- Academic library patrons want to be fairly autonomous
- Gen Y’s penchant for gaming means that information is increasingly being structured with a ‘collaborative competitive’ emphasis
- E-learning and lifelong learning continue to grow in importance (A. Wilson, public presentation, 21 June 2004).

The OCLC’s findings are evident in the tutorials I studied. Common information literacy themes recur across all library tutorial sites: evaluating Internet resources, using databases in the library, etc. These topics reflect the importance of e-learning within the academic library.

Hands-on activities typically taught students how to find information without a librarian’s intervention. Often a ‘printable page’ option was offered so that pages could be carried into the physical library for easy reference during a search.

To varying degrees, games are also making an appearance in library tutorials. Ohio State even subscribes to Quia Web (http://www.quia.com/findout.html), an educational technology service that allows instructors to create their own games (vocabulary flash cards and crossword puzzles, in Ohio State’s case).

Graphics and multimedia
Because online learning is visually oriented, well-placed and consistent graphics/multimedia are vital. All the sites I examined made use of graphics. Sites that feature QuickTime movies (Bowling Green at http://www.bgsu.edu/colleges/library/infosrv/lue/dataline.html) or Flash (Penn State at http://www.libraries.psu.edu/instruction/infocycle/infocycle.html) are graphics-intensive. Other sites use graphics sparingly, usually for screen shots and menus. Of course, there are sound reasons for either approach.

I also noticed that many sites have embraced interactive multimedia elements—the FLYERS tutorial (http://library.udayton.edu/flyertutorial/) requires users to perform an action or provide feedback at several points. This trend seems to confirm the OCLC’s findings.
Appendix B: Editing Audio with Sound Studio, cover and table of contents
Editing Audio with Sound Studio
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Appendix C: Document Specification: CIM Quick Start Guides
The Center for Information Management (CIM) at Miami University Libraries is a self-service electronic resource facility, created in 1998 to provide the tools necessary for students, faculty, and staff to make effective use of information. It is a place where individual learning is encouraged as well as group problem solving and interaction. It is also a place where users can master essential information technology tools in informal group and individual settings (http://www.lib.muohio.edu/libinfo/depts/cim).

The CIM facility includes over 30 computers (Macintosh OS X and Windows XP) which run a variety of software for transforming raw information into useful forms. This transformation is often accomplished with the aid of peripherals such as scanners and VCR stations. The CIM staff is trained to assist users in operating the equipment and software.

To support the staff’s educational mission and to foster user autonomy, I intend to create several Quick Start Guides (QSGs), addressing typical CIM procedures. My primary goal is to create consistent and useful documents that meet the needs of novice CIM users. This document specification explains my plan for creating these guides.

**General Format**

Each QSG will begin with a concise informative title, aligned at the top of the page. A brief introduction to the software or hardware will follow. This introduction will provide factual information, but it will also provide subtle reassurance—novices need to feel that they are capable of using the software. Novices may also be unaware of the capabilities or uses of some software or hardware. The introduction will identify both the intended audience and some typical projects that might be performed. I also plan to provide the URLs of product help sites.

Because many applications use onscreen toolbars or specialized hardware, I will provide users with a screen capture or photograph of toolbars, machines, or the workspace before proceeding with the steps of operation. Using callouts to identify components, the graphic will function as a reference for the rest of the guide.

The majority of the QSG will be devoted to listing the steps for each procedure; some steps will feature explanatory graphics. At this time, I intend to use a two column portrait-oriented layout, featuring text on the left hand of the page and illustrations on the right. I’m setting very narrow margins to maximize space; however, I also intend to use white space strategically to avoid overwhelming the user with text.

If space allows, the document may conclude with a brief troubleshooting section; however, all QSGs will end with a reminder to consult CIM staff for further assistance.

**Production Information**

As we’ve already discussed, QSGs need to be 1-2 pages long. I will produce the documents in Microsoft Word XP; of course, graphics may require additional use of programs such as Photoshop. Production costs will be minimal, as QSGs can be printed and duplicated on white 8.5 x 11 inch letter sized paper, using office printers and copiers available in the library.

We’ve already identified two primary uses for QSGs: as laminated reference sheets and as handouts that can be distributed to users. Laminated version will feature some color text and graphics, but handouts should be reproducible in black and white as well.
I can also generate PDF versions of the document for use on the Web. Electronic versions of each QSG can be saved to any media you choose. In fact, QSGs could be incorporated into Web tutorials or other training materials in the future.

To organize and store the materials, I recommend keeping both the laminated reference sheets and the handouts in a tabbed binder at the attendant’s desk. To accommodate the three-hole punch on the left side of the page, I will set a 1.5 inch margin; I plan to set 0.5 inch margins on all other sides to maximize space for text, graphics, and charts.

Text will be in Times New Roman, no smaller than 10-12 point size, which will promote legibility. Graphics may include photographs, screen captures, callouts, charts, and other visual aids. These aids will be carefully chosen to maximize the user’s understanding of the procedure and to make the best use of the allotted space.

Each page will also feature the Miami University Libraries Identity Standard. I have experimented with several presentations for the first page, which are included for your review in Appendix A of this paper. A smaller version of the Identity Standard might also appear at the bottom of the second page, if you wish. Although the font used in the Identity Standard is not currently available, I chose a similar style, Arial Narrow Bold, for document headings.

**Audience Definition**

Although one of my most valuable opportunities for audience definition will occur during the Learning Technologies Summer Institute next week, I have already learned much about the CIM audience. I was able to observe a few student users during finals week, a time when learning new technology is stressful indeed!

CIM users may be students, staff, or faculty. Some are technologically proficient; however, many users are unfamiliar with the specialized types of technology available in the CIM. Student users come from a wide variety of academic disciplines, including communications, marketing, and interactive media studies. They may be working alone or with a group of people to create a project.

For most of the technology in CIM, I qualify as a novice user myself. As a novice, I noticed that I needed to feel that I was capable of using the software; that I could undo mistakes; and that I could apply previous technological experience to unfamiliar applications. I believe that QSGs will need to address these needs.

As I familiarized myself with the CIM, I found myself asking some of the same questions:

- What exactly can these programs do? For example, which programs should I use to burn CDs or edit audio?
- What are the advantages of certain programs over others? For example, what are the differences between Roxio and iTunes?
- How does the Mac environment differ from PC in certain applications? As a longtime PC user I found that my learning curve included a significant period of time to re-acquaint myself with the Mac environment.

In my documentation, I will address these questions. I also plan to conduct limited user testing, which may uncover problems I hadn’t anticipated. Testers may include CIM personnel, other library personnel, and novice users from other university departments.
Secondary audiences for QSGs may include new hires in the CIM, workshop participants from outside the university, and online audiences.

**Writer’s requirements**

I am grateful for the support I have received so far. I have been able to access the equipment, information, and personnel that I need. Now that exams are over, I hope to be able to spend more time in the CIM. Hands-on experience is essential to this project.

Right now, the project is somewhat broad in scope. I hope that we can agree to focus on approximately 5-10 priority procedures (depending upon complexity). These procedures might consist of those most frequently performed in the CIM; alternatively, I could focus on procedures that are performed infrequently, or those which are not well-supported by online help. If there is a need, I could document university procedures such as preparing electronic theses and dissertations. My primary goal in this project is to meet the needs of CIM users and personnel.

As the project progresses, I need access to owner’s manuals, training materials, and other archival material that might be available from the CIM. Vendors’ online tutorials have already proven helpful in many instances. Also, a quick catalog search shows that King Library also owns several books that may prove helpful. I intend to check out some of these books, as well as the digital camcorders and cameras that are available.

I am particularly interested in obtaining high quality product photos, graphics, or electronic resources that the CIM or the library may own. These resources would save me valuable time in this project.

Finally, the most important resources available will be people. People who are willing to share their expertise and time have already stepped forward. Furthermore, I think that brief interviews of experienced CIM desk attendants could prove valuable. Editing, testing, and discussing the documents with the right people will greatly support this project.

At this point, I envision few constraints in this project. Everyone in the library has been very helpful, and I am gradually learning my way around the CIM. Unforeseen technical difficulties or lack of access to key people would be the most likely cause of any delays in the project. Editing the Identity Standard has presented a few problems, which may be resolved soon.
## Schedules and milestones

The following schedule is based upon the internship outline that Belinda prepared.

<table>
<thead>
<tr>
<th>Week</th>
<th>Tasks</th>
<th>Notes</th>
</tr>
</thead>
</table>
| **May 10-14** | • LTSI participant observation  
• Continue to learn tasks in CIM  
• Produce rough or partial drafts of up to five QSGs | May begin informal user testing of portions of documents, if time permits |
| **May 17-21** | • Continue to learn tasks in CIM  
• Produce rough drafts of all QSGs and revise previous drafts  
• Conduct user testing | Begin CIM brochure development |
| **May 24-28** | • Revision  
• Additional user testing, if necessary  
• Produce final drafts, PDFs, and electronic versions of all drafts | Continue CIM brochure development |
Appendix D: Quick Start Guide usability testing documents
Information for Quick Start Guides usability testers

The Center for Information Management (CIM) at Miami University is a self-service electronic resource laboratory, created in 1998 to provide the tools necessary for students, faculty, and staff to make effective use of information. It is a place where individual learning is encouraged as well as group problem solving and interaction. It is also a place where users can master essential information technology tools in informal group and individual settings (http://www.lib.muohio.edu/libinfo/depts/cim).

The CIM facility includes over 30 computers (Macintosh OS X and Windows XP) which run a variety of software for transforming raw information into useful forms. This transformation is often accomplished with the aid of peripherals such as scanners and VCR stations. The CIM staff is trained to assist users in operating the equipment and software.

To support the staff’s educational mission and to foster user autonomy, I have created several Quick Start Guides (QSGs), addressing typical CIM procedures. In the interest of making these documents as accurate and useful as possible, I am conducting usability tests.

Usability tests
The purpose of these tests is to enable me to identify ways to make my drafts more effective. It is not a test of your abilities. I gather no personal data, other than your status at Miami and level of expertise on given procedures. It is also not absolutely necessary for you to be part of the target audience (novice users) in order to test these QSGs.

Depending upon the procedure, each QSG requires about 15 minutes or less to complete. You may work through as many or as few QSGs as you wish. You will not encounter any risk of harm in this process. You may stop participating in the test at any time.

Procedure I will first ask you to complete one short pre-test questionnaire to ascertain your level of experience. Then, using CIM equipment, you will be asked to work unaided through a QSG procedure. Try to work through the procedures exactly as they are written, asking for help only if you are unable to proceed. Make notes on the QSG draft if you wish.

During the test, I may observe your actions and take notes about any problems I perceive.

After the test, I will ask you to fill out a post-test questionnaire about each QSG that you complete.

Consent I have read and understood the description given above concerning the test. I volunteer to participate.

Name (please print)___________________________________________
Signature___________________________________________________
Date________________
Pre-Test Questionnaire: Quick Start Guides (QSGs)

Today’s date ________________

Your status at Miami:
- [ ] Undergraduate
- [ ] Graduate
- [ ] Staff
- [ ] Faculty
- [ ] Other ________________

How often have you used the CIM?
- [ ] Never
- [ ] Once or twice
- [ ] Several times
- [ ] Frequently

Please circle your level of experience on the following software and hardware applications

<table>
<thead>
<tr>
<th>Software and Hardware Applications</th>
<th>Never used</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac OS X</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows XP</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsoft Office</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macromedia Dreamweaver</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Web authoring software/HTML coding</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flatbed Scanners</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slide Scanners</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaner 5 RealSystem</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other video editing software</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dubbing VHS video</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iTunes</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felt Tip Sound Studio</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other audio editing software</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Post-Test Questionnaire: Quick Start Guides (QSGs)

Today’s date __________________

Name of the QSG you tested (see top of first page) ________________________________________________

Please circle your level of agreement with the following statements about the QSG

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>By working through the QSG, I learned something that I didn’t already know about the software or the process</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I quickly understood the format or layout of the QSG</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I was frequently confused as I worked through the QSG</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I needed help to complete much of the QSG</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The steps made sense to me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Directions were easy for me to follow</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Graphics helped me to learn the process</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Graphics were readable/clear</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Typeface was readable/clear</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I was able to complete the QSG quickly (in 15 minutes or less)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I was able to save my files satisfactorily</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I found the software or process complicated</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I would enjoy using this software or process again for one of my own projects</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>In my opinion, a novice would benefit from using this QSG</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Please list any problems or unexpected results that you encountered *(use the back of this paper if necessary)*

1. ____________________________________________________________________________________________

2. ____________________________________________________________________________________________

3. ____________________________________________________________________________________________

Please list any other information that should be included in the QSG *(use the back of this paper if necessary)*

______________________________________________________________________________________________

Please list any information that could have been omitted from the QSG *(use the back of this paper if necessary)*

______________________________________________________________________________________________

Thank you for completing the usability test! Your answers will help me to improve the QSGs and assist future CIM users
Appendix E: Quick Start Guide to Flatbed Scanning
Quick Start Guide to Flatbed Scanning

Scanning photographs, documents, and drawings allows users to copy and view images in several print and Web formats. Several CIM computers are attached to flatbed scanners, which are accessed with VueScan 8.0.6, a versatile and user-friendly software application. This Quick Start Guide is intended for users who have no experience with flatbed scanners, but who are familiar with Mac or Windows operating environments. Mac screens are shown throughout this Guide; PC screens will look slightly different. The complete Users’ Manual for this software is available at http://www.hamrick.com/vuescan/vuescan.pdf

Ensure that you have adequate permanent storage space before you begin. Backup your files and folders at the end of each session. CIM computers provide temporary storage space only.

Step One: Prepare to scan image

Before scanning, you can define image properties to minimize the need for editing.

1. Open the scanner lid and lay your document face down on the glass.
   - The top of the document should face toward the embossed icon on the scanner bed.
   - To ensure straight alignment within the scanned image, place the document flush against the margins of the glass.

2. Close the scanner lid gently.
   - When scanning a book, rest the lid loosely against the binding—do not force the lid down.

3. Open VueScan.
   - The main menu screen appears.

4. Navigate through VueScan’s option panel menus (below) to select settings for your scan.
   - Default settings produce low resolution JPEG files, suitable for e-mailing because file size remains relatively small. For other options, see Selecting Scanner Resolution on next page.
Selecting Scanner Resolution

Before scanning, consider your project’s requirements for output, resolution, and file format. If you plan to use a photographic image in multiple formats (both Web and print, for instance), set the scan at a higher resolution to produce archival quality. You can then edit copies of the image in various file formats to suit your needs.

5. Within Input category, select Quality: E-mail, Web, Print, Edit, or Archive.
   - Edit and Archive settings produce TIFFs (higher resolution); all others produce JPEGs.
   - You can also click checkboxes within the Output category to select JPEG or TIFF formats.
   - Choosing Options>Standard allows you to select dots per inch (dpi) to increase image quality.

Step Two: Preview and Scan Image

When you are satisfied with all settings, you are ready to perform a preview and final scan.

1. Click Preview on far left of Button Bar.
   - The scanner may require warm-up time.
   - Scan progress displays at the bottom of the menu screen.
   - Do not open scanner lid during the scan.
   - Mechanical noises and pauses are normal during scans.
   - Image appears in the Preview Panel.
   - A crop box (aka selection marquee) appears around the image.

2. Click and drag the borders of the crop box to fit the size of your image.
   - If desired, readjust settings and preview image again.

3. Click Scan on the Button Bar.
   - Do not open scanner lid during the scan.
   - Mechanical noises and pauses are normal events during the scan.
   - The scanned image opens in a new Preview window as crop0001 and automatically saves to the Desktop.
   - Continue to preview and scan other images as needed.

4. Rename and save images in the desired location.
   - Be sure to retrieve your media from the scanner before leaving the CIM.

Thank you for choosing the CIM for your multimedia needs. Please consult the CIM staff if you require further assistance.
Appendix F: Quick Start Guide Template
Quick Start Guide to XYZ Software

Introduction goes here. Include name of software and what it is used for. Identify the audience for the Quick Start Guide. Include URL of User Guides, if available.

Ensure that you have adequate permanent storage space before you begin. Backup your files and folders at the end of each session. CIM computers provide temporary storage space only.

Step One: Do something

<table>
<thead>
<tr>
<th>1. Numbered steps go on this side. Helpful information can go in bulleted list.</th>
<th>Screen shots go on this side. Sizes up to about 3 inches in width work well.</th>
</tr>
</thead>
</table>

Step Two: Do something else

<table>
<thead>
<tr>
<th>1. Notice that numbers start over at each section.</th>
<th>Screen shots go on this side. Use Fireworks vector tools to draw circles or boxes (Red FF0000, 4 pixel line)</th>
</tr>
</thead>
</table>

And so on.

Naming Conventions:
- Web, Web page, Web site
- E-mail, e-mail
- TIFF
- JPEG
- All **menu commands** and **button names** in bold
- Menu commands in bold, with right arrow: **File>Open**
- All software titles in italics (e.g. *Dreamweaver*)

Boilerplate text for end:
*Thank you for choosing the CIM for your multimedia needs. Please consult the CIM staff if you require further assistance.*